

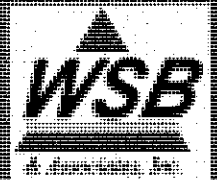
**Wetland Management Plan**



**City of St. Louis Park  
Wetland Management  
Plan**

*Prepared for:*

**City of St. Louis Park**



**City of St. Louis Park**  
**Wetland Management Plan**

**August 13, 2001**

**Prepared by:**

**WSB & Associates, Inc.**  
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## TABLE OF CONTENTS

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	<u>Page</u>
I. Executive Summary .....	I-1
II. Introduction & Purpose .....	II-1
III. Existing Regulatory Framework .....	III-1
IV. Wetland Inventory Methods .....	IV-1
V. Wetland Inventory Results and Classification Results .....	V-1
VI. Enforcement, Amendments, and Appeals .....	VI-1

Appendix A. List of Technical Panel and Citizen Advisory Members

Appendix B. St. Louis Park MnRAM 2.0

Appendix C. Wetland Assessment Results and Location Map

Appendix D. Potential Mitigation Locations

## SECTION I

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### I. Executive Summary

Wetlands provide many benefits and, as such, are important resources to a community. They provide critical habitat for many types of birds, mammals, amphibians, reptiles, invertebrates, and plants. Wetlands can also act to improve water quality and provide water quantity control by storing water during storm events. Wetlands allow for groundwater interactions, whether it be recharge or discharge. Additionally, wetlands provide aesthetic value, nature observation areas, and areas for education and scientific research. Because of the importance of wetlands and the role wetlands play within a community, they must be considered during development review and city-wide planning in order to balance protection for these wetlands and development and growth of the city.

**Section II** provides the introduction and purpose of the Wetland Management Plan (WMP). It includes a description of existing resources, a discussion of the development within the City, and outlines the intent of this Plan. The WMP encompasses wetlands within the City that have been identified on the National Wetland Inventory (NWI).

**Section III** discusses the regulatory framework for wetlands. This section provides information of the role of the Minnehaha Creek Watershed District and Bassett Creek Watershed Management Organization as the Local Government Unit (LGU) for the Wetland Conservation Act and also provides a brief overview of other agency jurisdiction over wetlands, including the Department of Natural Resources (DNR), U.S. Corps of Engineers, the Minnesota Pollution Control Agency (MPCA).

The methods used to inventory and classify the wetlands within the City of St. Louis Park are contained in **Section IV**. The Minnesota Routine Assessment Method (MnRAM) version 2.0 (**Appendix B**) was used to identify the functions and values of the wetlands. This section also outlines the Circular 39 and Cowardin method of wetland classification. Wetlands within St. Louis Park were classified using both methods. No wetlands were delineated as part of these procedures.

**Section V** provides the results of the wetland inventory and assessment and provides classification of the wetlands. Wetland Types 2, 3, 4, and 5 are represented within the City of St. Louis Park. All of these wetlands receive stormwater from the storm sewer system. Detailed information about each wetland is included in **Appendix C**.

**Section VI** provides information on enforcement, appeals, and the amendment procedure for this Plan.

## SECTION II

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### **II. Introduction and Purpose**

#### **A. Description of Existing Resources**

The City of St. Louis Park is located in the southeast quadrant of Hennepin County. There are approximately 38 wetlands within the City. All known National Wetland Inventory (NWI) wetlands within the City were evaluated with the exception of those areas where permission to access the site was either not granted or the site could not be accessed due to safety issues.

Wetlands and other natural resources of special interest exist within the City of St. Louis Park. These include Minnehaha Creek, Twin Lake, Bass Lake, and Westwood Lake. Westwood Lake is located within the Westwood Nature Center, an environmental education facility. A more detailed description of the City's existing resources can be reviewed in the Comprehensive Water Resource Management Plan.

#### **B. Extent of Development**

The City of St. Louis Park is fully developed and as such, most of the wetlands receive directed stormwater. Due to the fully developed nature of the City, little space is available to pretreat stormwater prior to discharge to wetlands. However, as areas redevelop, it is the intent of the City to provide pretreatment as feasible as outlined by the functions and values of the wetlands.

#### **C. Intent of plan**

The intent of the City of St. Louis Park WMP is to provide a means for the City to manage its wetlands. This plan provides guidelines for wetland management and assistance with Wetland Conservation Act. By evaluating the functions and values of wetlands, the City can more effectively evaluate the impact of redevelopment on the resource and the potential for restoration of wetland functions and values. This plan is not intended to replace rules or policies of the Watershed Districts.

## SECTION III

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### III. Existing Regulatory Framework

The current regulatory framework for wetlands in Minnesota involves a variety of agencies. These agencies include the Department of Natural Resources (DNR), U.S. Corps of Engineers, and Watershed Districts. A brief discussion of the regulatory agencies and their jurisdiction is outlined below:

#### A. Department of Natural Resources

Public Waters and Wetlands are those that are regulated by the Minnesota Department of Natural Resources (DNR) at and below the ordinary high water level (OHW). The location of these wetlands can be found on the DNR Protected Waters and Wetland Maps. Any water appropriation from or impact to a public water may require a permit from the DNR. The DNR Protected Waters and Wetlands are shown in **Appendix C**. The DNR Area Hydrologist can be contacted for more information on DNR regulations at (651) 772-7910.

#### B. U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers regulates the discharge of dredged or fill materials to wetlands and other water bodies through Section 404 of the Clean Water Act. Any impact, including filling, draining, or excavation, may require a permit from the Corps. Wetland delineations are also subject to U.S. Corps of Engineer approval. The area regulatory branch can be contacted for additional information of the Corps regulations at (651) 290-5375. Depending on the size and extent of the wetland impact, the Corps may involve the Minnesota Pollution Control Agency (MPCA). The MPCA can be contacted to obtain more information at (651) 296-8852.

#### **GP/LOP-98MN**

The GP/LOP-98-MN replaces all Nationwide Permits (NWP) under Section 404 of the Clean Water Act within Minnesota. The GP/LOP-98-MN went into effect on January 31, 2000. The intent of this permit is to create a more streamlined procedure by which projects will be covered under a General Permit (GP) or Letter of Permission (LOP). The MPCA has provided 401 certification for most of the GP/LOP-98-MN permit with a few exceptions.

The GPs are intended to be non-reporting and cover the following projects:

- Projects that impact 400 sf or less of wetland

### SECTION III

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- Projects that impact 1/3 acre or less of wetland for maintenance activities
- Projects that are currently eligible for authorization under some Corps existing, non-controversial, non-reporting NWP.

The LOPs require submission of an application and confirmation of approval in writing from the Corps. Eligible projects include projects that affect between 400 sf and 2 acres of wetland (or less than 5 acres of wetland for a road improvement project). The LOP eligible projects that affect more than 10,000 sf of wetland are subject to interagency review similar to the existing NWP review process.

Projects that affect more than 2 acres of wetland (or more than 5 acres for public road improvements and upgrades on existing roads), all projects in calcareous fens, or a project that affects Federal Wild and Scenic River would require Individual Permit review procedures.

For more information, the Corps of Engineers can be contacted at (651) 290-5375 or access their website at [www.mvp.usace.army.mil](http://www.mvp.usace.army.mil).

#### C. Wetland Conservation Act

The Wetland Conservation Act (WCA) was first passed in 1991 and has been subsequently amended. The Board of Water and Soil Resources (BWSR) published MN Rules 8420 in accordance with the Wetland Conservation Act laws.

The intent of the WCA is to achieve a “no net loss” of wetlands in Minnesota. Therefore, the Wetland Conservation Act prohibits the filling and/or draining of wetlands unless the activity is exempt or wetlands are replaced by restoration/creation of wetland areas of at least equal public value.

The WCA is administered by Local Government Units (LGU's). The Minnehaha Creek Watershed District (MCWD) and Bassett Creek Watershed Management Organization (BCWMO) act as the LGU for any wetland filling or draining within the City boundaries. Information about the MCWD can be obtained by calling (952)471-0590 or at their website at [www.minnehahacreek.org](http://www.minnehahacreek.org). Information about the BCWMO rules can be obtained by calling (763)541-8210.

## SECTION IV

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### IV. Wetland Inventory Methods

#### A. Background Information

Mapping for the City was initially reviewed to identify potential areas where wetlands may exist within the City. The City of St. Louis Park Comprehensive Water Resource Management Plan (2000) had identified and provided a limited evaluation of the wetlands within the City. The wetlands identified within the Water Resource Management Plan were based on wetlands shown on the National Wetland Inventory Map (NWI). The NWI was used to identify the wetland locations for the City's WMP.

After potential locations of wetlands were identified in the office on the NWI, these locations were field verified for their presence. The presence or absence of a wetland was determined using the criteria for a wetland set forth in the 1987 Manual for Delineating and Identifying Jurisdictional Wetlands (U.S. Corps of Engineers, 1987).

It is important to note that wetland edges were not delineated as part of this project. A wetland delineation would need to be performed as part of any potential impact or development activity near the wetland. In addition, the absence of a wetland from this plan does not necessarily mean that a wetland is not present on the site. Additionally, only the large wetlands complexes associated with Minnehaha Creek were evaluated rather than the entire Minnehaha Creek stream system.

#### B. Existing Typing Systems for Wetlands

Outlined below are the two different wetland typing systems that are utilized in Minnesota.

- Circular 39 adapted from *Wetlands of the United States*
- Cowardin System adapted from *Classification of Wetlands and Deepwater Habitats of the United States*

##### Circular 39

The Circular 39 was developed in 1956 by the U.S. Fish and Wildlife Service. This system breaks wetlands into eight categories. This system is a simple, quick way to categorize wetlands. These categories include the following:

Type 1: Seasonally flooded basin or floodplain

Type 2: Wet meadow



## SECTION IV

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- Type 3: Shallow marsh
- Type 4: Deep marsh
- Type 5: Shallow open water
- Type 6: Shrub swamp
- Type 7: Wooded swamp
- Type 8: Bog

### Cowardin System

The Cowardin System was developed in 1979 also by the U.S. Fish and Wildlife Service. This system is more precise than the Circular 39 system. Cowardin describes wetlands using a tier system with each tier describing the wetland in more detail. The tier system is outlined as follows:

#### Tier 1 - Systems

- Marine (not used in Minnesota)
- Estuarine (not used in Minnesota)
- Riverine
- Lacustrine
- Palustrine

#### Tier 2 - Subsystems

- Riverine - Tidal, lower perennial, upper perennial, intermittent
- Lacustrine - limnetic, littoral
- Palustrine - no subsystems

#### Tier 3 - Classes

- Rock
- Unconsolidated bottom
- Streambed
- Aquatic bed
- Emergent
- Scrub-shrub
- Forested
- Open Water
- Moss-Lichen

Finally, modifiers are added to the description to identify the type of water regime. These modifiers include the wetland being saturated, temporarily flooded, permanently flooded, etc. Other modifiers can be used as well that describe water chemistry, soil type, and whether the wetland has been ditched or farmed, etc.

## SECTION IV

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An example of a Cowardin described wetland would be a PEMCd wetland. This classification indicates that the wetland has been described as palustrine (P) with emergent vegetation (EM) that is seasonally flooded (C) and has been affected by ditching or draining (d).

### C. Wetland Functions and Values Assessment

After background information about the location of a potential wetland was obtained and the wetland was field verified, a functions and values assessment was performed and a photograph of the wetland was taken for reference.

Functions and values of each wetland were evaluated using Minnesota Routine Assessment Method (MnRAM) 2.0. MnRAM was developed by the Interagency Wetland Group. MnRAM evaluates wetland functions and values based on the following categories in accordance with Wetland Conservation Act Rules:

- Floral diversity and integrity
- Water quality protection
- Fish and wildlife habitat
- Flood/stormwater attenuation
- Groundwater interaction
- Shoreline protection
- Aesthetic/recreation/education and science
- Commercial uses

A copy of MnRAM 2.0 can be found in **Appendix B**.

Due to the lack of available groundwater information, the groundwater interaction function of the wetlands within the City of St. Louis Park was not evaluated. Commercial uses were also not evaluated during this assessment since none of the wetlands within the City perform this function.

## SECTION V

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### V. Wetland Inventory and Classification Results

#### A. Overview of MnRAM Results

Approximately 36 wetlands within the City of St. Louis Park were evaluated using MnRAM 2.0 as discussed in **Section IV**. Wetland types 2, 3, 4, and 5 are represented within the City limits. Detail about the results of the evaluation can be seen in **Appendix C**.

All of the wetlands show signs of impact by stormwater or other disturbance. Nearly all of the wetlands receive direct storm water from the storm sewer system. There is very little opportunity to provide treatment for storm water adjacent to many of these wetlands due to the fully developed nature of the City. Retrofitting the storm sewer system is not feasible or cost effective on a city-wide basis.

#### B. Wetland Management Classification

Based on the MnRAM Assessment, the location of the wetlands, the size of the wetlands, and any special uses for the wetlands, the City has placed wetlands into Manage I or Manage II classifications. Manage I wetlands are of higher quality, special purpose, and are located primarily on public land. These wetlands include Westwood Lake, Bass Lake, and Meadowbrook Lake. The remainder of the wetlands within the City have been placed in the Manage II category.

Manage I wetlands will be managed as follows:

- A 20 foot minimum buffer around the perimeter of wetlands will be implemented, where feasible, by eliminating mowing activities. Wider buffer widths will be implemented in accordance with Watershed District standards if wetlands are proposed to be impacted by filling or draining.
- Perimeter stormwater treatment systems will be allowed where upstream treatment cannot be provided. Grit chamber systems will be constructed upon redevelopment if a perimeter system cannot be constructed. Maintenance to remove accumulated sediment is anticipated to occur on an "as-needed" basis.

Manage II wetlands will be managed as follows:

- Continue to utilize wetlands for stormwater management as wetlands are used in their present condition.

## SECTION V

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- A 10 foot buffer around the perimeter of wetlands will be encouraged through public education efforts. Wider buffer widths will be implemented in accordance with Watershed District standards if wetlands are proposed to be impacted by filling or draining.

In the management of surface water and wetlands for all wetlands, the City anticipates the following:

- Upon redevelopment, developers will be required to pretreat stormwater from the site in accordance with the Comprehensive Water Resource Management Plan. **Section IV and Appendix U** of the Comprehensive Water Resource Management Plan outline treatment requirements for redevelopment.
- As flood problem areas are addressed (as outlined in the Comprehensive Water Resource Management Plan), functions and values improvements may be incorporated as feasible and cost effective in the design of these improvements.
- Remove sediment from the storm sewer systems and existing treatment basins as outlined in the Comprehensive Water Resource Management Plan (**Appendix J**).
- The City will implement the NPDES Phase II program as outlined in the Comprehensive Storm Water Management Plan to meet the guidelines from the Minnesota Pollution Control Agency.
- The City will continue its public education program to educate residents about the importance of wetlands, how to improve water quality, and landscaping alternatives available for residents with property abutting water / wetlands.
- The development of a wetland buffer and stormwater management ordinance will be investigated as part of the implementation of the Comprehensive Water Resource Management Plan.
- As opportunities arise to pretreat stormwater prior to discharge or complete other improvements to enhance wetland functions and values, the City will evaluate and implement these opportunities as funding is available based on the functions and values assessment.

## SECTION V

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- The City will develop a no or low phosphorous ordinance.
- The City will investigate the use of biological control of purple loosestrife as part of the implementation of this plan.
- The City Council has determined that the City will not purchase homes or private property to provide pretreatment for water bodies. The displacement of residents and businesses is not feasible for the City. Retrofitting the storm sewer system is not economically or physically possible.

It is anticipated that the Minnehaha Creek Watershed District will complete functions and values assessment of the wetlands within the City in the next few years. The City will review the results of these assessments and will amend the plan, if necessary, after receiving the results.

### C. **Public Education Plan**

As part of the implementation of the Wetland Management Plan (and the Water Resources Management Plan), a public education plan has been developed. The implementation of this plan is anticipated to include the following:

- Expand water quality monitoring through citizen volunteers to 5-7 more lakes/wetlands within the City.
- Provide articles in the *Sun Sailor* and *Park Perspective* paper and newsletter about water quality, wetlands, buffers, and other water resource related topics.
- Expand the water resource related information available on the City's Internet site.
- Create and/or show water resource / wetland informational videos on the City's cable access channel.
- Utilize existing neighborhood groups for wetland and neighborhood clean-up days, shoreline restoration projects, or other projects identified through the neighborhood groups.

### C. **Potential Wetland Mitigation / Restoration Locations**

Wetlands and adjoining upland and wetlands that could be enlarged or restored within the City were evaluated for their potential to be possible locations for wetland mitigation or wetland improvement areas. To determine if an area had the potential for wetland mitigation or restoration, the following factors were taken into account:

## SECTION V

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- Open space existed adjacent to the wetland where the wetland could be expanded, or
- Portions of the wetland could be restored through revegetating a disturbed wetland and/or reestablishing hydrology of a partially drained wetland, or
- Wetlands were degraded and an improvement project could be undertaken if the funding were available.

This plan did not take into account if the land owner was willing to sell the land, nor was a feasibility study undertaken to determine if other outstanding factors may play a role in the use of these lands for wetland mitigation. The following wetlands have been identified as potential areas for improvement/restoration projects if funding becomes available:

1. **Lamplighter Pond - Wetland No. 8:** Lamplighter Pond has been expanded in the City's past to hold stormwater. This wetland experiences significant flooding during large storm events. There is no buffer adjacent to most of the wetland and the slope of the wetland below the normal water level is too steep to allow emergent vegetation to become established. Steps that could be taken to improve the Pond could include establishment of a buffer adjacent to the wetland and re-grading the side slopes below the normal water level to create a more gradual shelf that would encourage emergent vegetation growth. This wetland could also benefit from other shoreline restoration through planting the buffer and emergent area with native species.
2. **Wolfe Park Pond - Wetland No. 39 :** While a water quality project has been completed in the past near Wetland # 39, the wetland itself has no buffer and no emergent vegetation. This wetland could benefit from a shoreline restoration project and measures to reduce the goose population from disrupting the vegetation. By establishing a buffer of taller grass, the geese may be deterred from disrupting the upland vegetation.
3. **South Twin Lakes - Wetland No. 2:** There is existing space adjacent to this wetland that could be used, if needed, to expand the wetland for wetland credit. This option does not include an analysis as to if the land is available or if the project would be feasible to construct or if public support is available .
4. **Oak Lake - Wetland No. 34:** There is existing space adjacent to this wetland that could be used, if needed, to expand the wetland for wetland credit. This option does not include an analysis as to if the land is available, if the project would be feasible to construct, or if public support is available.

## SECTION V

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5. **Wetland No. 4:** There is existing space adjacent to this wetland that could be used, if needed, to expand the wetland for wetland credit. This option does not include an analysis as to if the land is available, if the project would be feasible to construct, or if public support is available
  
6. **Water Quality Improvement Projects:** With the implementation of expanded water quality monitoring, the need for water quality improvement projects could be identified. It is anticipated that the results of the monitoring will be evaluated as the data becomes available. If the need for a water quality project is identified, it could be undertaken provided that funding is available. This could include providing pretreatment prior to discharge to a wetland or retrofitting existing treatment facilities.
  
7. **Purple Loosestrife Control:** The City is currently undertaking a program to use biocontrol agents to reduce the purple loosestrife within selected areas within the City.

Appendix D shows the locations of these areas.

## SECTION VI

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### VI. Enforcement and Amendments

It is the intention of the City of St. Louis Park to have this Wetland Management Plan reviewed and approved by the Board of Water & Soil Resources (BWSR) and adopted as part of the Comprehensive Water Resource Management Plan. Once approved, no significant changes to this Plan can be made without the approval of BWSR. Significant changes to this Plan shall be made known to the following parties:

- The Mayor, City Council, City Staff, and City Engineer
- Minnehaha Creek Watershed District (MCWD)
- Bassett Creek Watershed Management Organization (BCWMO)
- Board of Water and Soil Resources

The intent of this plan is to provide guidelines for management of wetlands within the City. This plan is not intended to replace the rules of the MCWD and BCWMO. If impacts to wetlands are proposed and/or redevelopment occurs, the project is subject to the St. Louis Park Comprehensive Water Resource Management Plan and the MCWD and BCWMO rules and policies.

The City will review the Watershed District wetland functions and values assessments when completed, and will amend the Plan, if necessary, after receiving the results.



**Appendix A**  
**List of Technical Panel Members & Citizen Members**

Technical Advisory Panel

Doug Snyder, Board of Water and Soil Resources

Wayne Barstad, DNR Ecological Services

Jack Frost, Metropolitan Council

Glenda Spiotta, Minnehaha Creek Watershed District

Andrea Moffatt, WSB & Associates (for the City)

Citizen Input

To obtain public input, a letter was sent to residents within 150' of a wetland summarizing the Wetland Management Plan, its potential impact on the City, and inviting participation in a public meeting. An article on the *Park Perspective* and *Sun Sailor* was also published that provided information about the Wetland Management Plan and invited participation in a public meeting. The meeting was held May 23, 2001 and was attended by 14 interested residents. The comments provided by these residents are included in this Appendix.



## Memorandum

**To:** *Honorable Mayor and City Council  
Carlton Moore  
City of St. Louis Park*

**From:** *Andi Moffatt, WSB & Associates*

**Date:** *July 2, 2001*

**Re:** *Wetland Management Plan  
WSB Project No. 1007-35*

The purpose of this memo is to provide a summary of the comments that were received as part of the public meeting that was held on May 23, 2001 to discuss the City's Wetland Management Plan and provide a recommendation to the City about the Plan.

The City Council requested on February 12, 2001 that extra efforts be taken to inform residents about the Wetland Management Plan and its potential impact on the City. In order to inform the public about the Wetland Management Plan and public meeting, articles were published in the *Park Perspective* newsletter and the *Sun Sailor* paper. Residents within 150' of a wetland were sent letters in the mail inviting them to the attend the meeting. The meeting was attended by 14 interested residents. The comments provided by these residents are outlined below:

1. A suggestion was made for the City to provide an incentive to homeowners to create a buffer strip around the wetland. This could be in the form of the City purchasing the plant material for residents who were interested in creating a buffer strip.
2. A suggestion was made that wider buffer widths be incorporated into the Plan. Currently the Plan states that city-owned wetlands will have a 10 foot buffer and owners who have wetlands within their property would be encouraged to have 5 foot buffers. (Please note that the Minnehaha Creek Watershed District has wider buffer widths depending on the size of the wetland. These widths would go into effect if a permit is required by the MCWD for erosion control, wetland impact, floodplain impact, or stormwater management.)
3. A suggestion was made to have organized neighborhood clean-up days to clean up wetland areas.
4. Many of the residents indicated they were willing to participate in wetland clean-up projects or wetland buffer planting projects but need the technical information on the best way to create buffers and need assistance in organizing the neighborhoods.

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5. A suggestion was made to control the purple loosestrife in the wetlands. The residents were informed that the Plan currently provides for the City to investigate the use of biological control to eradicate the purple loosestrife plants.
6. Support for a low/no phosphorous ordinance was indicated by many of the residents.
7. A question was asked as to whether the DNR could stock fish in Cobble Crest Pond.
8. A question was asked if the City would allow a resident to hire a 3<sup>rd</sup> party to treat a lake. Mr. Moore indicated that if a resident were to give a formal proposal for such a project, the City would review it.
9. A suggestion was made to develop more detailed management plans for each wetland within the Manage I category, which includes Westwood Lake, Bass Lake, and Meadowbrook Lake.

Additionally, comments were received from the Metropolitan Council and the Department of Natural Resources, who have been involved in the development of the Wetland Management Plan. These agencies encouraged the City to provide a more aggressive approach to improve the water quality of the Manage I wetlands, increase the buffer widths, and include plans to restore the functions and values of some of the poorer quality wetlands. The comment letters from the agencies are enclosed for your information and review.

In order for the City to complete the Wetland Management Plan and submit it for Board of Water and Soil Resources approval (BWSR), as required by Minnesota Rules 8420, we recommend the following changes to the Plan:

- To respond to Comment #1, #2, and the agency comments, increase the buffer widths for the city-owned Manage I wetlands from 10 feet to 20 feet and encourage homeowners to create buffer widths of 10 feet or greater. Discussion can be added to the Plan that as part of implementation of the Plan, the City will investigate providing incentives to homeowners to create buffers around wetlands as part of the public education plan.
- To respond to Comments #3 and #4, add discussion about the City's public education plan which could include utilizing neighborhood groups to complete wetland clean-up projects.
- To respond to the agency comments, add discussion regarding wetlands that are of poor quality but have the potential to be restored to a higher

quality wetland. This would include outlining steps that could be taken to improve the wetland quality if funds were available and identifying wetlands that would benefit from such a project.

- In response to Comment # 5, the Wetland Management Plan currently contains a plan to address purple loosestrife within wetlands. No additional changes are needed to address this issue.
- In response to Comment #6, the a no/low phosphorous ordinance is part of the implementation of the Stormwater Management Plan. No additional changes are needed to address this issue.
- In response to Comments #7 and #8, the Wetland Management Plan is not intended to address stocking fish or allowing residents to treat lakes. These items could be addressed through a different process with the City, if the City Council so chooses.
- In response to Comment #9, developing detailed lake management plans is beyond the scope of the Wetland Management Plan. However, the development of these plans could be included as part of the implementation of the Wetland Management Plan. If the City Council so chooses, development of detailed lake management plans can be added to the Wetland Management Plan as part of an implementation task.

We recommend revising the Plan to increase buffer widths, expand the discussion of the City's public education/involvement process, and add discussion about the potential to restore some of the poorer quality wetlands within the City as outlined above prior to submission of the Wetland Management Plan for BWSR approval. If these items are not addressed, it is anticipated that approval of the Plan by BWSR may not be secured. Once the Plan is revised, it is anticipated that the City's Comprehensive Surface Water Management Plan with the Wetland Management Plan could be presented to the City Council for adoption.

If you have any questions, please feel free to contact us at (763)541-4800.


**Metropolitan Council**
*Improve regional competitiveness in a global economy*
**Environmental Services**

February 1, 2001

Andi Moffatt  
 Wetland Biologist  
 WSB and Associates  
 4150 Olson Memorial Highway, Suite 300  
 Minneapolis MN 55422

RE: City of St. Louis Park Wetland Management Plan

Dear Mr. Moffatt:

Thank you for sending the Metropolitan Council a copy of the draft of the St. Louis Park Wetland Management Plan.


Obviously, given the fully developed urban condition of the City, opportunities for managing the wetlands to improve their condition are extremely limited. Council staff is pleased to see that the City will use any re-development opportunities to improve the quality of the runoff before it is discharged to the wetlands.

Staff would recommend, however, that where a wetland is within publicly owned land, such as a park, and also for those wetlands classified as "Managed I" class, the City pursue a more aggressive approach to improve the quality of these resources. For Example the City of Richfield has been able to pursue a runoff improvement program for Wood Lake, a small urban lake with numerous stormwater discharges and extremely limited areas along the shoreline. Grants may be available for such work. You may wish to contact Jack Frost about such opportunities. Jack can be reached at 651-602-1078 or via e-mail: [jack.frost@merc.state.mn.us](mailto:jack.frost@merc.state.mn.us)

Staff would also recommend that whenever possible the City adopt somewhat more generous standards for the width of buffers. A five-foot buffer in the case of the "Manage II" class will provide little in terms of either wildlife protection or runoff improvement.

Again, thank you for the opportunity to comment. If you wish to discuss these comments, please contact me at 651-602-1145, or feel free to contact Jack Frost the Watershed Coordinator for your area.

Sincerely,

  
 Marcel R. Jouseau, Manager  
 Environmental Planning and Resources Management

Cc. Jack Frost, MCES Watershed Coordinator

Post-it® Fax Note	7671	Date	02-01-01	# of pages	1 of 1
To	Andi Moffatt	From	Marcel JOUSEAU		
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Fax #	763-541-1700	Fax #			

Metro Region  
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January 30, 2001

Ms. Andi Moffatt  
WSB & Associates  
4150 Olson Memorial Highway  
Suite 300  
Minneapolis, MN 55422

RE: City of St. Louis Park Draft Wetland Management Plan.

Dear Ms Moffatt;

Andi, thanks for the opportunity to review this draft plan. In general, it looks good and it's pretty much what I had expected. I have just a few minor comments.

1. You'll recall that in September I indicated that I'd like to see a "restore" management classification included in the plan. What I was looking for was some stronger acknowledgment that opportunities exist for the restoration of the diminished functions of otherwise medium to high quality wetlands. Perhaps a separate classification is asking too much, considering the small number of wetlands and the extent of development in St. Louis Park. So, short of that, I'd recommend the inclusion of language stating that, given the values of wetlands (as stated in Section I), the City will make every effort to restore functions and values as the opportunities arise. The third sentence in Section IIC could be amended to read, "By evaluating the functions and values of wetlands, the City can more effectively evaluate the impact of redevelopment on the resource and the potential for restoration of wetland functions and values." This adds a perspective that goes beyond the situations within which wetland mitigation is needed and signals the City's recognition that restoration is an important end in itself.
2. It appears that Appendix B is intended to contain a number of items, only one of which (the MnRAM) is included. Missing are the outlines for Circular 39 and the Cowardin methods and the DNR Protected Waters and Wetlands. The protected waters and wetlands are listed in Appendix C, so it may not be necessary to repeat that information in Appendix B.
3. The proposed 10 foot minimum buffer for Manage I wetlands and 5 foot buffer for Manage II wetlands are insufficient for providing protection from adjacent land uses. If you look at other

St. Louis Park Wetland Management Plan  
page 2

wetland plans, i.e., City of Eden Prairie or City of Rosemount, you'll see minimum buffers of 60-75 feet for high quality wetlands and 10-25 feet for low quality wetlands. I assume that existing development conditions limit buffer width, but it would be good if these minimum widths could be increased.

Thank you again. If you'd like to discuss these comments, please give me a call at 651-772-7940.

Sincerely,

Wayne Barstad  
Regional Environmental Assessment Ecologist

c: Kathleen Wallace, Regional Director  
Doug Norris, Wetlands Coordinator



**Appendix B**  
**St. Louis Park MnRAM 2.0**

**MINNESOTA ROUTINE ASSESSMENT METHOD  
FOR EVALUATING WETLAND FUNCTIONS (MnRAM) -  
Version 2.0**

**GENERAL INFORMATION:**

Project Number or Name: <b>1007-35</b>	Wetland Number:
Name of Wetland Owner (if necessary):	
Location: County: <b>Hennepin</b> Section <u>   </u> ;      ¼      ¼      ¼ Township      Range	
Major Watershed: <b>Miss. Rvr - Metro</b>	Minor Watershed:      Local Government Unit: <b>MCWD</b>
Evaluator(s): <b>A. Moffatt</b>	Date(s) of Site Visit(s): <b>August , 2000</b>

**SCOPE AND LIMITATIONS:**

1. Description of **temporal factors** of this assessment due to seasonal considerations and/or existing hydrologic and climatologic conditions (e.g., after heavy rains, snow or ice cover, frozen soil, during drought period, during spring flood, during bird migration). Circle those that apply and list others (use back of page if necessary):
  
2. Description of the **Wetland Assessment Area**: the project site, the wetland, wetland portion or wetland complex being evaluated. (If the evaluation area consists of more than one wetland type it may be necessary to complete an assessment for more than one **Wetland Assessment Area**.) (Use back of page if necessary):
 

**Wetland #**
  
3. Description of the **Wetland Comparison Domain**: the geographic area (e.g., the political boundary, major or local watershed boundary or ecoregion subsection) used for functional comparison. Briefly explain the reason(s) for the choice of the Wetland Comparison Domain. The Wetland Comparison Domain should generally be of a size so as to include some relatively undisturbed Reference Standard Wetlands. (Use back of page if necessary.):
 

**City of St. Louis Park**
  
4. Describe the **purpose** of this assessment: i. regulatory/impact determination; ii. replacement/mitigation design; iii. restoration; iv. monitoring; v. inventory/planning/classification; vi. educational; vii. other
 

**#iv and #v**

\* Functional level is based on a comparison with a REFERENCE STANDARD WETLAND. A REFERENCE STANDARD WETLAND is a wetland judged to have the highest level of overall sustainable functional capacity for a particular type (based on a classification system such as Circular 39, Cowardin/NWI or HGM) within the Wetland Comparison Domain. See page 1 for more information about Reference Standard Wetlands.

## SITE DESCRIPTION

### I. HYDROLOGIC SETTING

A. Describe the hydrogeomorphology of the wetland (check those that apply):

- Depressional
- Riverine (within the river/stream banks)
- Lacustrine Fringe (edge of deepwater areas)
- Extensive Peatland
- Slope
- Floodplain
- Other \_\_\_\_\_

B. The hydrology source is primarily:      Ground water only      Surface water only  
*See Appendix B*      Both (Surface and Ground water)      Unknown

Additional Observations/Descriptions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

C. Has the hydrology of (a.) the wetland, or (b.) the wetland's immediate watershed, been substantially altered by excavation, ditching, tiles, dams, culverts, pumping, diversion of surface flow, or changes to runoff within the immediate watershed (circle those that apply)?

- a.) Yes \_\_\_ No \_\_\_      If Yes; when and how?  
 b.) Yes \_\_\_ No \_\_\_      If Yes; when and how?

D. Does the wetland have discernable inlets or outlets? \_\_\_ If Yes, describe each inlet and outlet.

inlets: \_\_\_\_\_  
 outlets: \_\_\_\_\_

E. Does the wetland have standing water? \_\_\_\_\_ If yes, maximum depth (if known)? \_\_\_\_\_  
 Approximately how much of the wetland is inundated? \_\_\_\_\_% Date of observation \_\_\_/\_\_\_/\_\_\_

F. What is the predominant hydroperiod (seasonal water level pattern) of the wetland(s)?

- Permanently Inundated (surface water present all year in every year)
- Intermittently Exposed (surface water present all year, except during severe droughts)
- Semi-Permanently Inundated (surface water present throughout growing season in most years)
- Seasonally Inundated (surface water present for extended periods in early growing season but absent by end of the growing season in most years)
- Temporarily Inundated (surface water present for brief periods during the growing season, water table usually below soil surface)
- Permanently Saturated (surface water seldom present but substrate permanently saturated except during severe drought)
- Saturated (surface water seldom present but substrate saturated for extended periods during the growing season)

### III. SOILS

#### General Description of Soil(s) from Soil Survey and on Site:

	Adjacent UPLAND Area	WETLAND Area
Soil Survey Classification(s): Is the area an inclusion? Y N U		
Soil texture and drainage characteristics		
Soil disturbed? If yes, describe below.		
Field Observations:		

### V. SURROUNDING LAND USES

A. What is the estimated area of the wetland's immediate watershed in acres (*optional*)? \_\_\_\_\_

B. Describe the surrounding land uses in the table:

LAND-USE	Estimated % of Wetland's Immediate Watershed (Can be > 100%)
Developed (Industrial/Commercial/Residential)	
Agricultural: cropland	
Agricultural: feedlots	
Agricultural: grazing	
Forested	
Grassed (without grazing)	
Recreation areas/parks	
Highways/Roads	
Mining (specify type)	
Water and wetlands	
Other (specify)	

**Step 2:** Consult the high, moderate and low quality descriptions for the appropriate plant community. Read the descriptions in that order before making a decision as to which is most applicable. Also, read the following description for "exceptional" quality plant communities applicable to all communities.

**Exceptional Quality:**

Plant communities undisturbed, or sufficiently recovered from past disturbances, such that they represent pre-European settlement conditions. Non-native plant species are absent or, if present, constitute a minor percent cover of the community. Rare, threatened and/or endangered species (consider both State and Federal listings) may be present. Unique features (e.g., patterned peatlands, virgin prairie, old growth forests) may also be present. Page numbers below refer to "*Wetland Plants and Plant Communities of MN and WI*", 2nd Edition, (USACOE - St. Paul District; Eggers and Reed).

**I. SHALLOW, OPEN WATER COMMUNITIES (page 28)**

**High Quality:** Diverse aquatic bed communities dominated by 3 or more species of native aquatic plants such as pondweeds, water lilies, bladderworts, wild celery, duckweeds, water crowfoots, native milfoils, etc.

**Moderate Quality:** Dominated by 1 or 2 species of native aquatic plants.

**Low Quality:** Dominated by Eurasian water milfoil; or no aquatic vegetation present.

**II.A. and B. DEEP AND SHALLOW MARSHES (page 51-53)**

**High Quality:** Dominated by a diverse assemblage (3 or more species) of native aquatic plants (e.g., bur-reeds, bulrushes, arrowheads, cattails, sweet flag, pondweeds). Cattails comprise less than 40 percent cover. Purple loosestrife absent or comprises less than 5 percent cover.

**Moderate Quality:** Dominants include at least 2 species of native aquatic plants, often arranged in a band or interspersed as patches. Purple loosestrife, if present, comprises less than 25 percent cover. Cattail, if present, comprises 40 to 85 percent cover.

**Low Quality:** Purple loosestrife comprises more than 25 percent cover; or cattail comprises more than 85 percent cover.

**III. A. SEDGE MEADOWS (page 86)**

**High Quality:** Stands of sedges with 5 or more species of native forbs. Grazing, haying, artificial drainage, stormwater input, excavation and/or impoundment absent or minimal. Reed canary grass, purple loosestrife and/or stinging nettle absent or cumulatively comprise less than 5 percent cover. Buckthorn absent or comprises less than 10 percent cover.

**Moderate Quality:** Stands of sedges subjected to moderate degree of the disturbances listed above. Two to 4 species of native forbs present. Reed canary grass, purple loosestrife and/or stinging nettle cumulatively comprise less than 40 percent cover. Buckthorn absent or comprises less than 30 percent cover.

**Low Quality:** Stands of sedges highly impacted by grazing, haying, artificial drainage, stormwater input and/or cropping. Reed canary grass, purple loosestrife and/or stinging nettle cumulatively comprise more than 40 percent cover; and/or buckthorn, if present, comprises greater than 30 percent cover.

with minimal disturbances such as artificial drainage, peat mining, filling, impoundment, stormwater input (especially salt), etc.

Moderate Quality: Community moderately impacted by the disturbances listed above.

Low Quality: Community highly impacted by the disturbances listed above. Indicators could include die-out of sphagnum mosses and/or invasion by buckthorn, aspen, stinging nettle, dewberry, cattail, etc.

#### IV.B. CONIFEROUS BOGS (page 175)

High Quality: Stands of tamarack and/or black spruce undisturbed or minimally disturbed by artificial drainage, peat mining, logging, filling, impoundment, stormwater input, etc.

Moderate Quality: Stands of tamarack and/or black spruce moderately impacted by disturbances listed above.

Low Quality: Majority of stands of tamarack and/or black spruce dead or dying due to highly disturbed condition. Substantial invasion by buckthorn, aspen, stinging nettle, dewberry, cattail, etc.

#### V.A. SHRUB-CARRS (page 180)

High Quality: Community undisturbed or minimally disturbed by artificial drainage, grazing, filling or impoundment. Dominated by native shrubs (e.g., dogwoods, willows) with a groundlayer stratum composed of five or more species of native grasses, sedges, rushes and/or forbs. Buckthorn, honeysuckle and/or box elder, if present, cumulatively comprise less than 10 percent cover. Reed canary grass, if present, comprises less than 10 percent cover.

Moderate Quality: Community moderately impacted by the disturbances listed above. One of two types: (1) shrub canopy composed of native species with a nearly monotypic reed canary grass groundlayer; or (2) shrub canopy composed of up to 50 percent non-native or disturbance indicator species (e.g., buckthorn, honeysuckle, box elder) with a groundlayer stratum composed of less than 5 species of native grasses, sedges, rushes and forbs; reed canary grass may be present but comprises less than 50 percent cover.

Low Quality: Community highly impacted by the disturbances listed above. Buckthorn, honeysuckle and/or box elder comprise more than 50 percent canopy cover and the groundlayer stratum is composed of greater than 50 percent cover of reed canary grass or non-native grasses/forbs.

#### V.B. ALDER THICKETS (page 192)

High Quality: Community undisturbed or minimally disturbed by artificial drainage, grazing, filling, impoundment, etc. Non-native shrubs (e.g., buckthorn), if present, comprise less than 10 percent cover. Groundlayer stratum may be depauperate or composed of native grasses, sedges, rushes, ferns and/or forbs. Reed canary grass, if present, comprises less than 10 percent cover.

Moderate Quality: Community moderately impacted by the disturbances listed above. Non-native and/or disturbance indicator shrubs (e.g., buckthorn, box elder, honeysuckle) cumulatively comprise less than 40 percent cover. The groundlayer stratum, if present, has less than 50 percent cover of reed canary grass.

Low Quality: Community highly impacted by the disturbances listed above with greater than 40 percent cover contributed by buckthorn, box elder and/or honeysuckle; and/or reed canary grass

Plant community #1 = _____	% of Wetland Assessment Area (can be >100%) = _____	functional level = _____
Plant community #2 = _____	% of Wetland Assessment Area (can be >100%) = _____	functional level = _____
Plant community #3 = _____	% of Wetland Assessment Area (can be >100%) = _____	functional level = _____
Plant community #4 = _____	% of Wetland Assessment Area (can be >100%) = _____	functional level = _____

*if more than 4 plant communities are present list them on the back of this page*

## Maintenance of Characteristic Hydrologic Regime

Wetlands with a natural outlet and mostly undisturbed conditions in the wetland and its local watershed would be rated as **exceptional** for this function.

1. Describe the wetland outlet characteristics:
  - High = Lacks constructed outlet; or the watercourse/stream has not been ditched/channelized.
  - Med. Hi. = Constructed outlet is at or above temporary wetland zone or outlet is managed to duplicate natural conditions;
  - Medium = Constricted or managed outlet; outlet lowered to significantly reduce temporary (< 7 days) and/or long-term (> 7 days) storage; evidence of ditched/channelized watercourse.
  - Low = Excavated or enlarged outlet; outlet removes most/all long-term storage, no/little/some temporary storage remains.
  
2. Describe the dominant land use and condition of the upland watershed that contributes to the wetland:
  - High = Watershed conditions essentially unaltered; e.g., land use development minimal, idle lands, lands in hay or forests or low intensity grazing on gentle (< 3%) to moderate (3 - 9%) slopes in good to excellent condition.
  - Medium = Watershed conditions somewhat modified; e.g., moderate grazing or recent logging on steep (> 9%) slopes; conventional till with residue management on moderate slopes, no-till on steep slopes
  - Low = Watershed conditions highly modified; e.g., intensive agriculture or grazing, no residue management on moderate or steep slopes, urban semi-pervious or impervious surface, intensive mining activities.
  
3. Describe the conditions of the wetland itself:
  - High = No evidence of recent tillage, temporary wetland zone intact; e.g., idle land, hayed or lightly to moderately grazed or logged. No compaction, rutting, or trampling damage to wetland.
  - Medium = Temporary wetland zone tilled or heavily grazed most years. Zones wetter than temporary receive tillage occasionally. Some compaction, rutting, or trampling in wetland is evident.
  - Low = Wetland receives conventional tillage most (> 75%) years; or otherwise significantly impacted (e.g., fill, cleared). Severe compaction, rutting, or trampling damage to wetland.

High = Clays or shallow to bedrock  
Moderate = Silts or loams  
Low = Sands

5. For flow-through wetlands, describe the functional level of the wetland in providing flood or stormwater storage/attenuation in relation to primary wetland vegetation cover type:

High = Dense vegetation  
Moderate = Combination of vegetation and open water  
Low = Primarily open water  
N/A = not applicable, wetland is not a flow-through type

6. Describe the functional level of the wetland in retarding or altering flood flows:

High = No channels present  
Moderate = Channels present, but not connected  
Low = Channels connecting inlet to outlet

7. Describe the flood/stormwater management level of the wetland.

High = Receives directed stormwater and water level managed to maximize flood/stormwater retention  
Moderate = Receives directed stormwater and water level unmanaged for flood/stormwater retention  
Low = Receives no directed stormwater and water level unmanaged for flood/stormwater retention

8. Describe the history of wetland losses in the major watershed. Estimate percentage of wetlands lost:  
\_\_\_\_\_ %

High = Most wetlands drained or filled (more than 50% lost).  
Moderate = Some wetlands drained or filled (20 - 50% lost).  
Low = Few wetlands drained or filled (less than 20% lost).

9. Describe the location of the wetland within the watershed:

local watershed:	upper	mid	lower
major watershed:	upper	mid	lower

**Functional Level of Flood/Stormwater Attenuation = \_\_\_\_\_ (record on page 5 summary).**

## Water Quality Protection

1. Y N Does the wetland receive direct discharge of managed water (e.g. municipal or road stormwater drainage, agricultural drainage outlet, industrial or municipal wastewater)?
2. Y N Do the surrounding or upstream land uses have the potential to deliver significant nutrient and/or sediment loads to the wetland?
3. Y N Does the wetland shape, flow inputs, and outlet configuration allow adequate residence time so that sediments are able to settle?
4. Y N N/A For non-isolated wetlands, does the wetland have significant vegetative density to decrease



### Rare/Unique Species and Specialized Habitat

1. Y N Is the wetland known to be used by locally rare species or species that are state or federally listed? (A list of state and federally listed species is attached in Appendix B.) If yes, wildlife habitat functional level rating = exceptional.
2. Y N Is the wetland known to provide specialized habitat components for particular species or groups of species that are not generally available elsewhere (e.g. colonial waterbird nesting colonies, significant amphibian breeding sites, deer wintering yards). If yes, wildlife habitat functional level rating = exceptional.
3. Y N Does the wetland provide seasonal or intermittent habitat components (e.g., amphibian breeding, resting/feeding by migratory waterfowl/shorebirds)?

### Habitat Structure

4. Indicate below how the plant species diversity of the evaluation wetland compares with a reference standard wetland of the same type and similar size within the wetland comparison domain.



5. What is the maintenance of characteristic hydrologic regime functional level from the Hydrology Section (on page 18)?  
Exceptional                      High                      Medium                      Low

### Habitat Interspersion and Connectivity

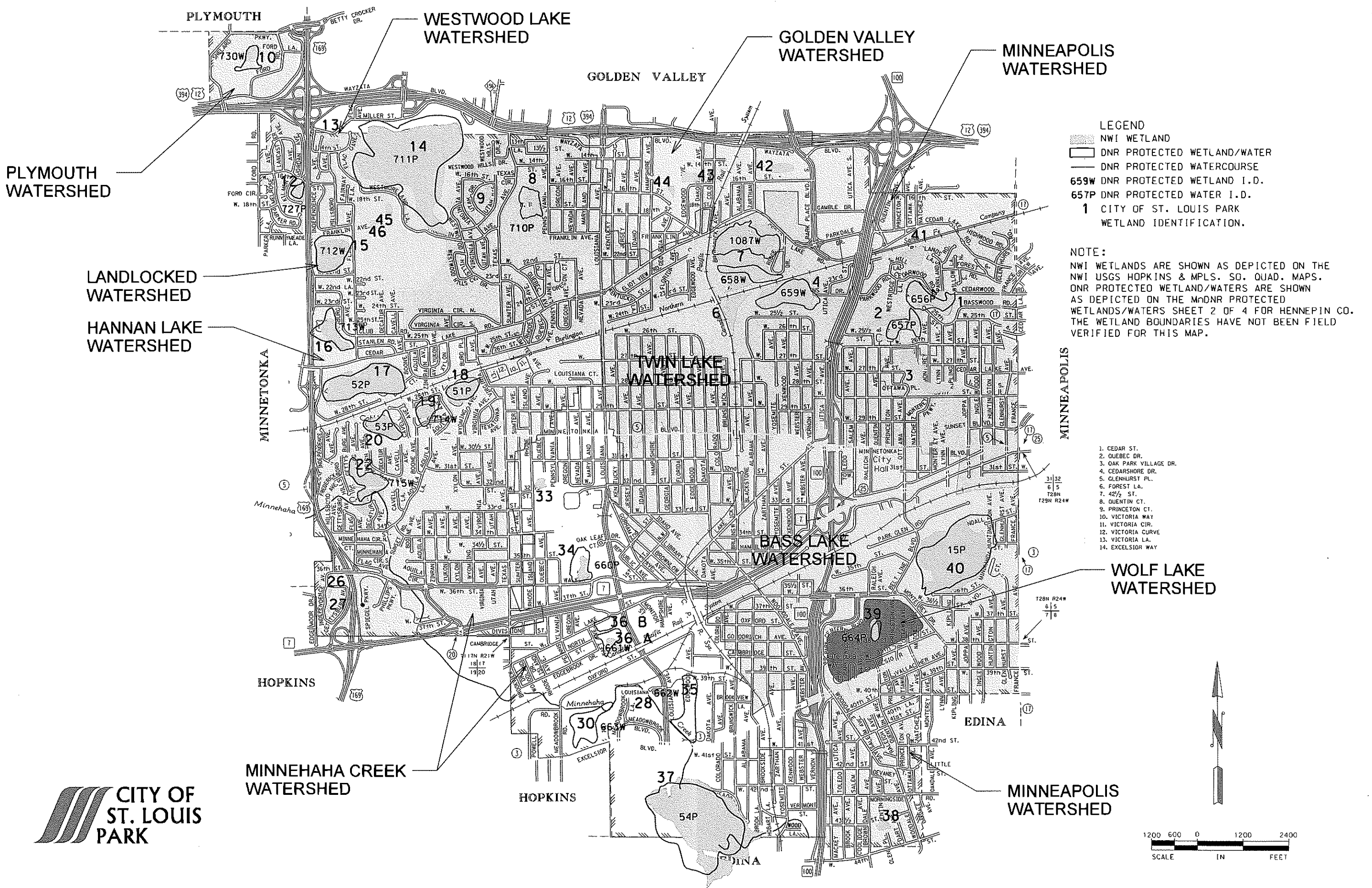
6. Describe the dominant land use and condition of the immediate watershed that contributes to the wetland:  
  
High = Watershed conditions essentially unaltered, e.g., land use development minimal, idle lands, low intensity grazing or haying, forests.  
Med. = Watershed conditions somewhat modified, e.g., moderate intensity grazing or haying; dispersed rowcrop agriculture; low density residential.  
Low = Watershed conditions highly modified, e.g., intensive rowcrop agriculture; urban semi-pervious or impervious surface, high density residential, intensive mining activities.
7. For depressional wetlands, describe the relative abundance (no. of basins/sq. mi.), relative density (acres of wetlands per sq. mi.) and interspersion of various wetland types within a 1 mile radius from the center of the assessment wetland:  
  
High = Abundance, density and interspersion very similar to Reference Standard Wetland  
Med. = Abundance, density and interspersion somewhat dissimilar to Reference Standard Wetland  
Low = Abundance, density and interspersion differs considerably from Reference Standard Wetland
8. Indicate below the extent to which the wetland either by itself or in conjunction with other habitat types provides a connection between larger wetlands or other habitat types that would otherwise be isolated by intensive agricultural or urban land use.

4. Y N Does the public have direct access to the wetland from public roads or waterways?
5. Is the wetland itself relatively free of obvious human influences, such as:
  - a. Y N Structures?
  - b. Y N Trash/pollution?
  - c. Y N Filling/dredging/draining?
  - d. Y N Invasive vegetation?
6. Is the area surrounding the wetland relatively free of obvious human influences, such as:
  - a. Y N Buildings?
  - b. Y N Roads?
  - c. Y N Other structures?
  - d. Y N Altered land uses?
7. Y N Does the wetland provide a spatial buffer between developed areas?
8. Y N Is the wetland and immediately adjacent area currently being used for (or does it have the potential to be used for) the following recreational activities? (Check all that apply.)

ACTIVITY	CURRENT USE	POTENTIAL USE
Education/cultural/scientific study		
Hiking/biking/skiing		
Hunting/fishing/trapping		
Boating/canoeing		
Food harvesting		
Wildlife observation		
Exploration/play/photography		
Others (list)		

Functional Level of Aesthetics/Recreation/Education/Cultural and Science = \_\_\_\_\_ (record on page 5 summary)

**Appendix C**  
**Wetland Assessment Results**

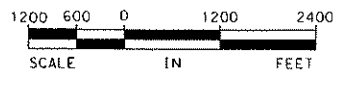


**LEGEND**

- NWI WETLAND
- DNR PROTECTED WETLAND/WATER
- DNR PROTECTED WATERCOURSE
- 659W** DNR PROTECTED WETLAND I.D.
- 657P** DNR PROTECTED WATER I.D.
- 1** CITY OF ST. LOUIS PARK WETLAND IDENTIFICATION.

**NOTE:**  
 NWI WETLANDS ARE SHOWN AS DEPICTED ON THE NWI USGS HOPKINS & MPLS. SQ. QUAD. MAPS. DNR PROTECTED WETLAND/WATERS ARE SHOWN AS DEPICTED ON THE MDNR PROTECTED WETLANDS/WATERS SHEET 2 OF 4 FOR HENNEPIN CO. THE WETLAND BOUNDARIES HAVE NOT BEEN FIELD VERIFIED FOR THIS MAP.

1. CEDAR ST.
2. QUEBEC DR.
3. OAK PARK VILLAGE DR.
4. CEDARSHORE DR.
5. CLENHURST PL.
6. FOREST LA.
7. 42 1/2 ST.
8. QUENTIN CT.
9. PRINCETON CT.
10. VICTORIA WAY
11. VICTORIA CIR.
12. VICTORIA CURVE
13. VICTORIA LA.
14. EXCELSIOR WAY



SCALE:	AS NOTED
PLAN BY:	MSS
DESIGNED BY:	PRM
PROJECT NO.:	1007-25
DATE:	1599B

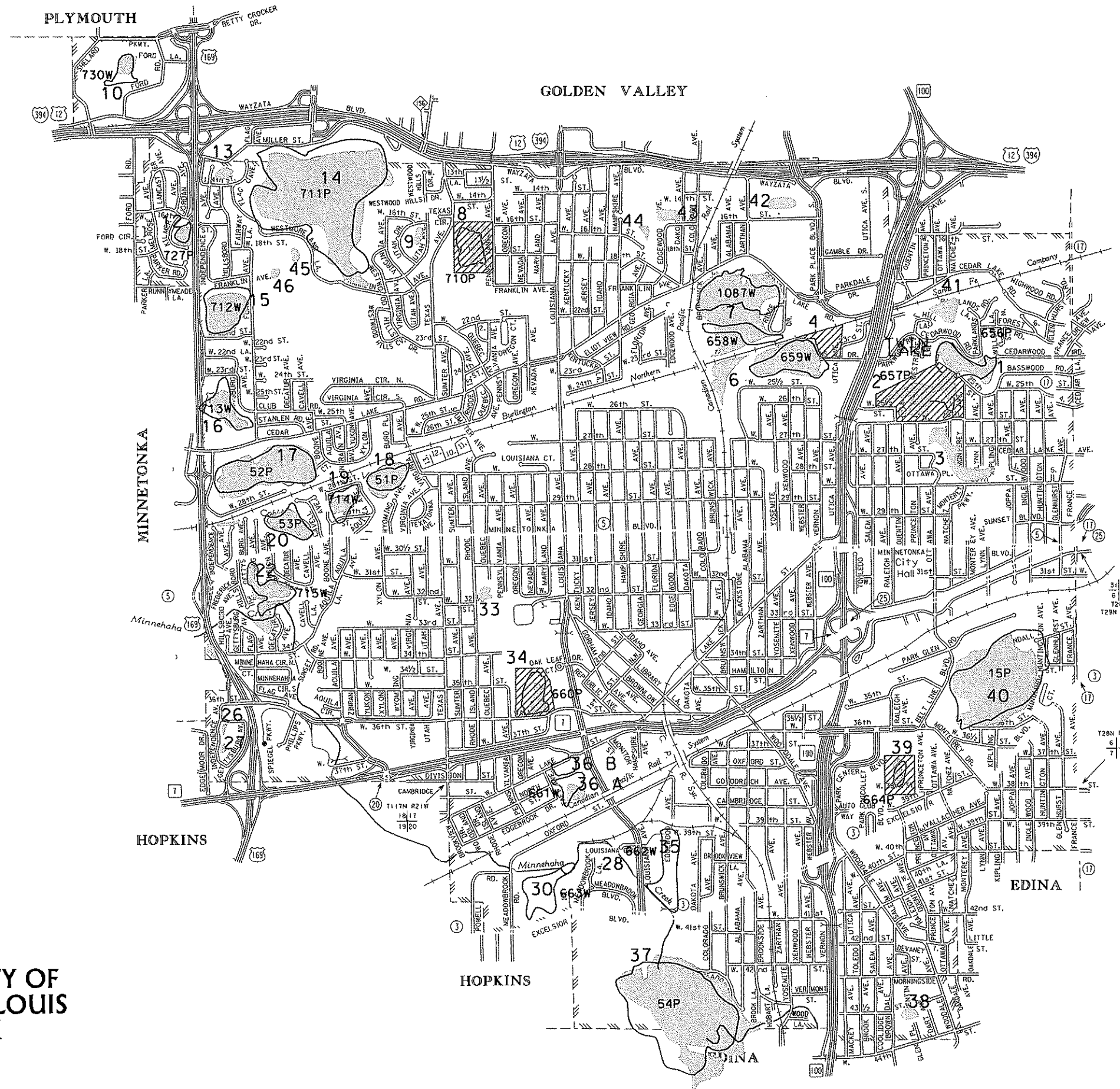
Summary of MnRAM 2.0 Assessments

Wetland Number	Wetland Name	Management Classification	DNR Number	Wetland Type		Plant Community			Functions and Values						
				Cowardin	Circular 39	1	2	3	Maintenance of Hydrologic Regime	Flood/Stormwater Attenuation	Water Quality Protection	Shoreline Protection	Wildlife Habitat	Fishery Habitat	Aesthetics/Recreation/Educ/Cultural
1	Twin Lake	Manage II	656P	PEM/UBF	Type 5	L	M	L	M	H	H	NA	M	M	M
2	Unnamed	Manage II	657P	PEMCd/ PEMFd	Type 3	M			M	H	M	NA	MH	L	H
3	Unnamed	Manage II		PEMB/ PFO1B	Type 2	L	L		M	H	MH	NA	M	L	LM
4	Unnamed	Manage II	659W	PEMCd	Type 3	L	L		H	H	M	NA	M	L	M
6	Unnamed	Manage II		PEMB	Type 2	L			M	H	ML	NA	ML	L	L
7	Unnamed	Manage II	1087W/ 658W	PEMAd/ PEMCd/ PEMFd/ PFO1/SS1C	Type 3	M	M		H	H	M	NA	H	L	M
8	Lampighter Pond	Manage II	710P	PUBG	Type 4	L	L		M	H	M	NA	M	L	H
9	Unnamed	Manage II		PUBG	Type 5	L	M		M	H	M	NA	M	L	M
10	Unnamed	Manage II	730W	PEMF	Type 4	M	M	M	H	H	M	NA	M	M	MH
12	Klimer Park Pond	Manage II	727P	PUBG	Type 5	L	L		M	H	M	NA	M	M	M
13	Unnamed	Manage II		PSS1/EMB	Type 2	M			H	H	M	NA	M	L	L
14	Westwood Lake	Manage I	711P	L1UBH/ PEMF/ PFO1C	Type 5	M	M		H	H	M	NA	H	M	E
15	Unnamed	Manage II	712W	PEMF	Type 3	L			H	H	M	NA	M	M	M
16	Unnamed	Manage II	713W	PEMF	Type 4	M	M		H	H	M	NA	M	M	M
17	Hannan Lake	Manage II	52P	PEMF/ PUBG	Type 5	L	ML		H	H	M	NA	M	M	M
18	Victoria Lake	Manage II	51P	PUBG	Type 5	M	M		M	H	M	NA	M	M	MH
19	Westling Pond	Manage II	714W	PUBG	Type 5	L	M		M	H	M	NA	M	M	M
20	Cobble Crest Lake	Manage II	53P	PUBG	Type 5	L	L		M	H	M	NA	M	M	M
22	Unnamed	Manage II	715W	PUBG/ PEMC	Type 4	L	L		MH	H	M	NA	M	M	M
26	Unnamed	Manage II		PUBFx	Type 4	M			M	H	M	NA	ML	L	M
27	Unnamed	Manage II		PUBFx	Type 4	M			M	H	M	NA	M	L	M
28	Part of Minnehaha Creek	Manage II	Yes	PEMCd	Type 3	M			M	H	M	H	H	M	M
29	Unnamed	Manage II		PEMF	Type 3	M			H	H	M	NA	ML	L	L
30	Part of Minnehaha Creek	Manage II	663W	PEMCd	Type 3	M			H	H	M	H	H	M	M
33	Unnamed	Manage II		PEMB	Type 2	L	M		M	H	M	NA	M	L	L
34	Oak Lake	Manage II	660P	PUBG	Type 5	L	M		M	H	M	NA	M	L	M
35	Part of Minnehaha Creek	Manage II	662W	PEMCd/ PEMFd	Type 3	M			H	H	M	H	H	M	M
36a	Unnamed	Manage II	661W	PUBGx	Type 5	L	M	M	M	H	M	NA	M	L	M

Wetland Number	Wetland Name	Management Classification	DNR Number	Wetland Type		Plant Community			Functions and Values <sup>1)</sup>						
				Cowardin	Circular 39	1	2	3	Maintenance of Hydrologic Regime	Flood/Stormwater Attenuation	Water Quality Protection	Shoreline Protection	Wildlife Habitat	Fishery Habitat	Aesthetics/Recreation/Educ/Cultural
36b	Unnamed	Manage II		PEMA	Type 2	L			H	H	M	NA	M	L	M
37	Meadowbrook Lake	Manage I	54P	PEMC/L1UBH	Type 5	M	M		M	H	M	H	H	M	H
38	Browndale Park Pond	Manage II		PEMF/PEMC	Type 4	L	M		MH	H	M	NA	M	L	M
39	Wolfe Park	Manage II	664P	PUBG	Type 5	L	L		M	H	M	NA	ML	L	L
40	Bass Lake	Manage I	15P	PEMC/PUBG/PUBF/PSS1Cd	Type 4	L	L	L	H	H	M	NA	H	M	H
41	Unnamed	Manage II		PEMB	Type 2	L			H	H	M	NA	ML	L	L
42	Unnamed	Manage II		PUBG	Type 5	L			M	H	M	NA	ML	L	M
43	Otten Pond	Manage II		PUBG	Type 5	L	M		H	H	M	NA	M	L	H
44	Unnamed	Manage II		PUBG	Type 5	L	L	M	M	H	M	NA	M	L	M
45	Golf Course water hazards - not evaluated														
46	Golf Course water hazards - not evaluated														

- 1) E = Exceptional  
H = High  
M = Moderate  
L = Low

**Appendix D**  
**Potential Mitigation Locations**

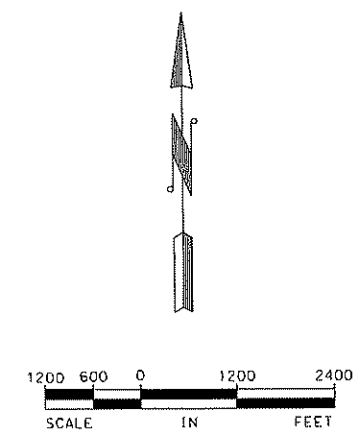


LEGEND

- NWI WETLAND
- DNR PROTECTED WETLAND/WATER
- DNR PROTECTED WATERCOURSE
- 659W DNR PROTECTED WETLAND I.D.
- 657P DNR PROTECTED WATER I.D.
- CITY OF ST. LOUIS PARK
- WETLAND IDENTIFICATION.
- POTENTIAL PUBLIC VALUE CREDIT AREA

NOTE:  
 NWI WETLANDS ARE SHOWN AS DEPICTED ON THE NWI USGS HOPKINS & MPLS. SO. QUAD. MAPS. DNR PROTECTED WETLAND/WATERS ARE SHOWN AS DEPICTED ON THE MDNR PROTECTED WETLANDS/WATERS SHEET 2 OF 4 FOR HENNEPIN CO. THE WETLAND BOUNDARIES HAVE NOT BEEN FIELD VERIFIED FOR THIS MAP.

1. CEDAR ST.
2. QUEBEC DR.
3. OAK PARK VILLAGE DR.
4. CEDARSHORE DR.
5. GLENHURST PL.
6. FOREST LA.
7. 42 1/2 ST.
8. OAKMINT CT.
9. PRINCETON CT.
10. VICTORIA WAY
11. VICTORIA CIR.
12. VICTORIA CURVE
13. VICTORIA LA.
14. EXCELSIOR WAY



**WETLAND MANAGEMENT PLAN**  
**ST. LOUIS PARK, MINNESOTA**

**POTENTIAL MITIGATION RESTORATION LOCATIONS**

SCALE:	AS NOTED	DESIGNER:	DATE:
PLAN BY:	MSS	AM	
CHECKED BY:	OTTAWA	1007-35	
PROJECT NO.:	1007-35		
RECORD COPY BY:			

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY OR UNDER MY DIRECT SUPERVISION AND THAT I AM AN ANNUALLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

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